

# Impaired Functional Exercise Capacity and Greater Cardiovascular Response to the 6-Minute Walk Test in Congenital Generalized Lipodystrophy

Jorge Luiz Dantas de Medeiros<sup>1¶</sup>, Bruno Carneiro Bezerra<sup>2¶</sup>, Helen Rainara Araújo Cruz<sup>2</sup>, Katarina Azevedo de Medeiros<sup>2</sup>, Maria Eduarda Cardoso de Melo<sup>3</sup>, Aquiles Sales Craveiro Sarmiento<sup>3</sup>, Marcela Abbott Galvão Ururahy<sup>4</sup>, Lucymara Fassarella Agnez Lima<sup>3</sup>, Alcebíades José dos Santos Neto<sup>5</sup>, Josivan Gomes Lima<sup>5</sup>, Vanessa Resqueti<sup>1,6</sup>, Lucien Peroni Gualdi<sup>2</sup>, Guilherme Fregonezi<sup>1,6</sup>, Julliane Tamara Araújo de Melo Campos<sup>3\*</sup>

## Supporting Tables

**S1 Table. ABI and 6MWD measurements (mean  $\pm$  SD and [95% confidence interval]) in all CGL subjects without and with metreleptin (MLP) replacement at baseline and 1-year follow-up.**

CGL subjects	Baseline (n/%)	1-year follow-up (n/%)	$p^b$
<b>ABI (right)</b>	<b>(n = 12)</b>	<b>(n = 8)</b>	
<b>No MLP</b>	<b>7 (58)</b>	<b>4 (50)</b>	-
	1.05 $\pm$ 0.11	1.06 $\pm$ 0.31	0.968
	[0.95 - 1.15]	[0.55 - 1.56]	-
<b>MLP</b>	<b>5 (42)</b>	<b>4 (50)</b>	-
	1.00 $\pm$ 0.13	1.14 $\pm$ 0.29	0.384
	[0.84 - 1.16]	[0.66 - 1.61]	-
$p^a$	0.495	0.721	-
<b>ABI (left)</b>	<b>(n = 12)</b>	<b>(n = 8)</b>	
<b>No MLP</b>	<b>7 (58)</b>	<b>4 (50)</b>	-
	1.00 $\pm$ 0.13	1.16 $\pm$ 0.14	0.082
	[0.87 - 1.12]	[0.94 - 1.39]	-
<b>MLP</b>	<b>5 (42)</b>	<b>4 (50)</b>	-
	1.27 $\pm$ 0.25	1.10 $\pm$ 0.16	0.305
	[0.94 - 1.59]	[0.84 - 1.36]	-
$p^a$	0.038	0.581	-
<b>6MWD (predict%)</b>	<b>(n = 9)</b>	<b>(n = 6)</b>	
<b>No MLP</b>	<b>4 (44.4)</b>	<b>3 (50)</b>	-
	79.08 $\pm$ 9.15	85.88 $\pm$ 16.76	0.516
	[62.52 - 93.64]	[44.24 - 127.5]	-
<b>MLP</b>	<b>5 (55.6)</b>	<b>3 (50)</b>	-
	66.68 $\pm$ 12.69	92.04 $\pm$ 14.65	0.040
	[50.92 - 82.44]	[55.64 - 128.4]	-
$p^a$	0.146	0.656	-

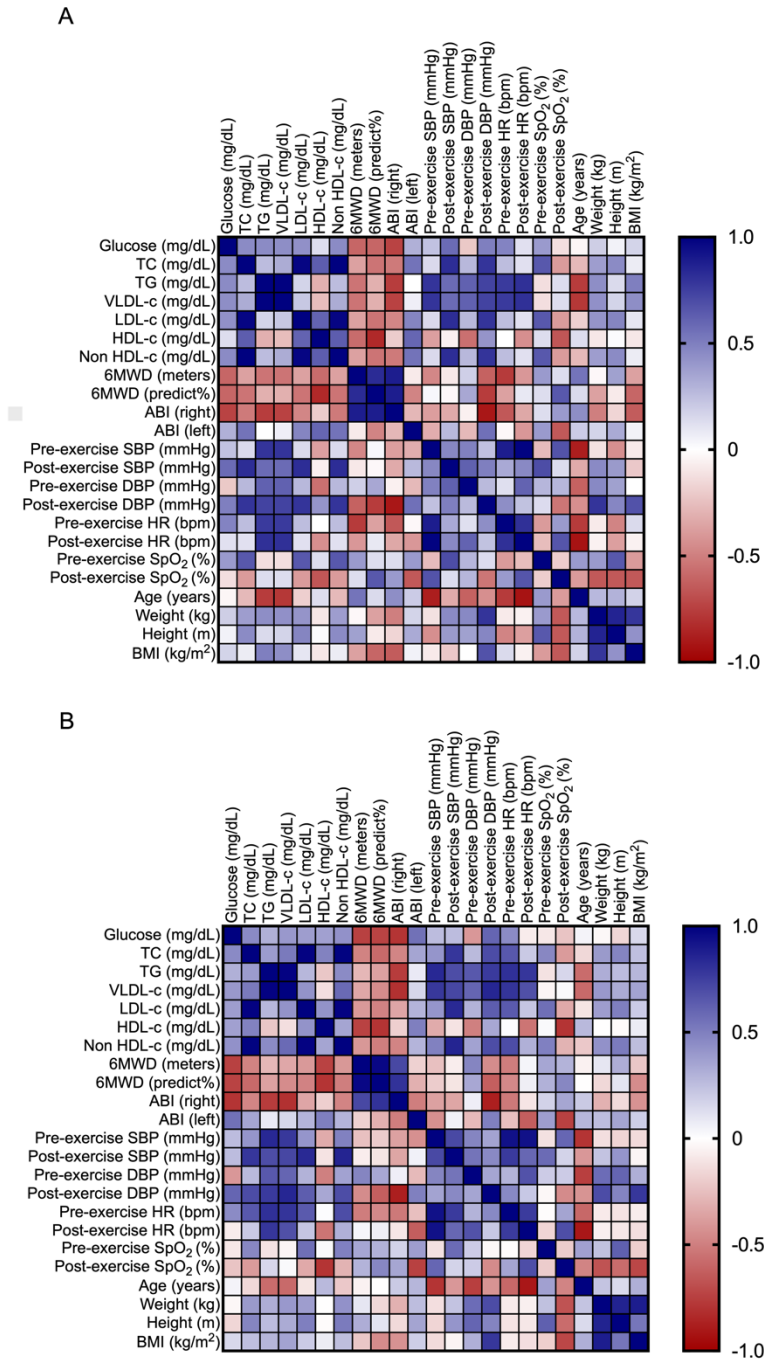
ABI: Ankle-Brachial Index. 6MWD: Six-minute walk distance.  $p^a$  and  $p^b$  values were based on independent unpaired t-tests. MLP: Metreleptin.

**S2 Table. Multiple linear regression analysis with right ABI at 1-year follow-up as the dependent variable in CGL subjects.**

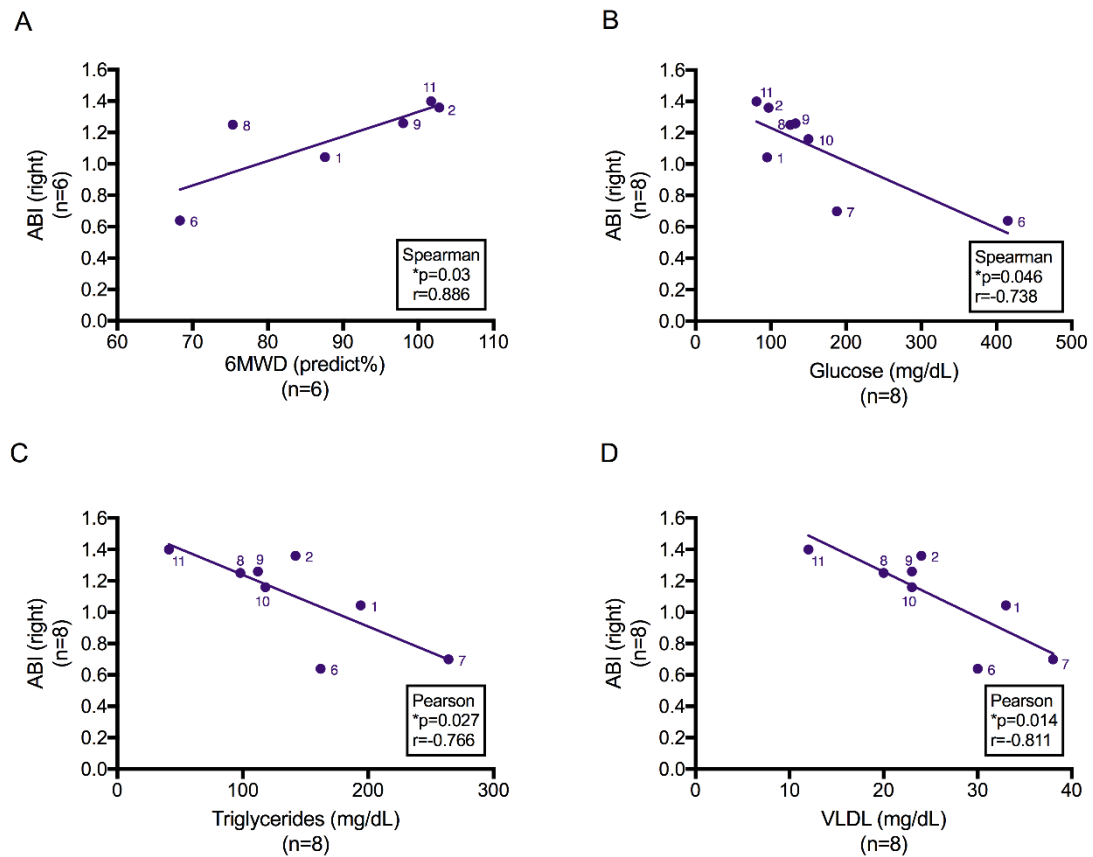
Variable	Coefficient $\beta$	95% CI	<i>p</i>
<b>Intercept (<math>\beta_0</math>)</b>	2.373	1.485 to 3.260	0.003
<b>Glucose (<math>\beta_1</math>)</b>	-0.001546	-0.002334 to -0.0007573	0.008
<b>Triglycerides (<math>\beta_2</math>)</b>	-0.002625	-0.004265 to -0.0009864	0.014
<b>Age (years) (<math>\beta_3</math>)</b>	-0.005731	-0.02201 to 0.01055	0.344
<b>BMI (kg/m<sup>2</sup>) (<math>\beta_4</math>)</b>	-0.02247	-0.06049 to 0.01555	0.156

Adjusted R<sup>2</sup>: 0.9497. 95% IC: 95% confidence interval. ABI: Ankle-Brachial Index. BMI: Body Mass Index.

## Supporting Images



**S1 Fig. Correlation among the ankle-brachial index (ABI) index, six-min walk distance (6MWD), hemodynamic indexes, metabolic, and anthropometric data in CGL subjects at 1-year follow-up.** (A) The upper panel shows Spearman correlation coefficient values. (B) The lower panel shows the Pearson correlation coefficient values. Variables with non-Gaussian distribution were: glucose, 6MWD (predict%), pre-exercise HR, pre-exercise oxygen saturation (SpO<sub>2</sub>), and post-exercise oxygen saturation (SpO<sub>2</sub>). TC: Total cholesterol. TG: Triglycerides.



**S2 Fig. Correlations among the right ankle-brachial index (ABI), six-min walk distance (6MWD), and metabolic parameters in CGL subjects at 1-year follow-up.** (A) Right ABI positively correlated with 6MWD. (B) Right ABI negatively correlated with glucose. (C) Right ABI negatively correlated with triglycerides. (D) Right ABI negatively correlated with VLDL-c. ABI, 6MWD, glucose, triglycerides, and VLDL-c at 1-year follow-up were used.  $r$  values of a Pearson or Spearman correlation coefficient and  $p$  values are included.